AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A discharging surface treatment method for generating a discharge between an electrode and a treatment target so that a coating film is formed on the surface of the treatment target by the discharging energy,

forming a powder mixture, comprising as one component: (a) a ferrous-family metal powder or a non-ferrous [[-family]] metal powder, wherein each of said metal powders can be formed of one or plural metals; and, as a second component, (b) one or a plurality of metal carbides, wherein the elemental metal of the carbide or carbides belongs to the ~~IVa, Va or VIa~~ IVB, VB or VIB families in the Periodic Table;

the non-ferrous [[-family]] metal powder having the same composition as the treatment target;

heating the powder mixture to a temperature at which said component (a) starts to melt to form an electrode ~~serving~~ that is approximately as hard as chalk and that serves as a discharge processing electrode, and

electrical conditions at a time when a base member of the treatment target is directly subjected to a discharging surface treatment so as to form an initial coating film, and electrical conditions at a time when [[a]] the initial coating film that has been formed on the base member is subjected to a further discharging surface treatment, are altered according to the characteristics of the treatment target material.

2. (Currently Amended) A discharging surface treatment method for generating a discharge between an electrode and a treatment target so that a coating film is formed on the surface of the treatment target by the discharging energy,

forming a powder mixture, comprising as one component: (a) a ferrous-family metal powder or a non-ferrous [[-family]] metal powder, wherein each of said metal powders can be formed of one or plural metals; and, as a second component, (b) one or a plurality of metal carbides, wherein the elemental metal of the carbide or carbides belongs to the ~~IVa, Va or VIa~~ IVB, VB or VIB families in the Periodic Table;

the non-ferrous [[-family]] metal powder having the same composition as the treatment target;

heating the powder mixture to a temperature at which said component (a) starts to melt to form an electrode ~~serving~~ that is approximately as hard as chalk and that serves as a discharge processing electrode, and

electrical conditions, at a time when [[a]] an initial coating film that has been formed is subjected to a discharging surface treatment, are altered at least once according to the characteristics of the treatment target material.

3. (Currently Amended) A discharging surface treatment method for generating a discharge between an electrode and a treatment target so that a coating film is formed on the surface of the treatment target by the discharging energy,

forming a powder mixture, comprising as one component: (a) a ferrous-family metal powder or a non-ferrous [[-family]] metal powder, wherein each of said metal powders can be formed of one or plural metals; and, as a second component, (b) one or a plurality of metal carbides, wherein the elemental metal of the carbide or carbides belongs to the ~~IVa, Va or VIa~~ IVB, VB or VIB families in the Periodic Table;

the non-ferrous [[-family]] metal powder having the same composition as the treatment target;

heating the powder mixture to a temperature at which said component (a) starts to melt to form an electrode ~~serving~~ that is approximately as hard as chalk and that serves as a discharge processing electrode, and

electrical conditions at a time when a base member of the treatment target is directly subjected to a discharging surface treatment so as to form an initial coating film, and electrical conditions at a time when [[a]] the initial coating film that has been formed is subjected to a further discharging surface treatment, are altered according to the characteristics of the treatment target material, and

the electrical conditions, at the time when the initial coating film that has been formed on the base member is subjected to a discharging surface treatment, are altered at least once according to the characteristics of the treatment target material.

4. (Previously Presented) The discharging surface treatment method according to claim 1, wherein an inert gas is interpolated between the discharge processing electrode and the treatment target.

5. (Previously Presented) The discharging surface treatment method according to claim 2, wherein an inert gas is interpolated between the discharge processing electrode and the treatment target.

6. (Previously Presented) The discharging surface treatment method according to claim 3, wherein an inert gas is interpolated between the discharge processing electrode and the treatment target.

7. (Previously Presented) The discharging surface treatment method according to claim 1, wherein the discharge processing electrode is allowed to scan the treatment target so that the coating film is formed on the surface of the treatment target.

8. (Previously Presented) The discharging surface treatment method according to claim 2, wherein the discharge processing electrode is allowed to scan the treatment target so that the coating film is formed on the surface of the treatment target.

9. (Previously Presented) The discharging surface treatment method according to claim 3, wherein the discharge processing electrode is allowed to scan the treatment target so that the coating film is formed on the surface of the treatment target.

10. (Currently Amended) A discharging surface treatment device for generating a discharge between an electrode and a treatment target so that a coating film is formed on the surface of the treatment target by the discharging energy,

forming a powder mixture, comprising as one component: (a) a ferrous-family metal powder or a non-ferrous [[-family]] metal powder, wherein each of said metal powders can be formed of one or plural metals; and, as a second component, (b) one or a plurality of metal carbides, wherein the elemental metal of the carbide or carbides belongs to the ~~IVa, Va or VIa~~ IVB, VB or VIB families in the Periodic Table;

the non-ferrous [[-family]] metal powder having the same composition as the treatment target;

heating the powder mixture to a temperature at which said component (a) starts to melt to form an electrode ~~serving~~ that is approximately as hard as chalk and that serves as a discharge processing electrode, and

said discharging surface treatment device is provided with a switching unit which alters electrical conditions at a time when a base member of the treatment target is directly subjected to a discharging surface treatment so as to form an initial coating film, and electrical conditions at a time when [[a]] the initial coating film that has been formed on the base member is subjected to a further discharging surface treatment, according to the characteristics of the treatment target material.

11. (Currently Amended) A discharging surface treatment device for generating a discharge between an electrode and a treatment target so that a coating film is formed on the surface of the treatment target by the discharging energy,

forming a powder mixture, comprising as one component: (a) a ferrous-family metal powder or a non-ferrous [[-family]] metal powder, wherein each of said metal powders can be formed of one or plural metals; and, as a second component, (b) one or a plurality of metal carbides, wherein the elemental metal of the carbide or carbides belongs to the ~~IVa, Va or VIa~~ IVB, VB or VIB families in the Periodic Table;

the non-ferrous [[-family]] metal powder having the same composition as the treatment target;

heating the powder mixture to a temperature at which said component (a) starts to melt to form an electrode ~~serving~~ that is approximately as hard as chalk and that serves as a discharge processing electrode, and

said discharging surface treatment device is provided with a switching unit which alters electrical conditions, at a time when [[a]] an initial coating film that has been formed is subjected to a discharging surface treatment, at least once according to the characteristics of the treatment target material.

12. (Currently Amended) A discharging surface treatment device for generating a discharge between an electrode and a treatment target so that a coating film is formed on the surface of the treatment target by the discharging energy,

forming a powder mixture, comprising as one component: (a) a ferrous-family metal powder or a non-ferrous [[-family]] metal powder, wherein each of said metal powders can be formed of one or plural metals; and, as a second component, (b) one or a plurality of metal carbides, wherein the elemental metal of the carbide or carbides belongs to the ~~IVa, Va or VIa~~ IVB, VB or VIB families in the Periodic Table;

the non-ferrous [[-family]] metal powder having the same composition as the treatment target;

heating the powder mixture to a temperature at which said component (a) starts to melt to form an electrode ~~serving~~ that is approximately as hard as chalk and that serves as a discharge processing electrode, and

said discharging surface treatment device is provided with a first switching unit and a second switching unit, wherein said first switching unit alters the electrical conditions at a time when a base member of the treatment target is directly subjected to a discharging surface treatment so as to form an initial coating film, and which alters electrical conditions at a time when [[a]] the initial coating film that has been formed is subjected to a further discharging surface treatment, according to the characteristics of the treatment target material, and

wherein the second switching unit alters electrical conditions, at a time when the initial coating film that has been formed on the base member is subjected to a further discharging surface treatment, at least once according to the characteristics of the treatment target material.

13. (Previously Presented) The discharging surface treatment device according to claim 10, wherein an inert-gas supplying unit is installed so as to interpolate an inert gas between the discharge processing electrode and the treatment target.

14. (Previously Presented) The discharging surface treatment device according to claim 11, wherein an inert-gas supplying unit is installed so as to interpolate an inert gas between the discharge processing electrode and the treatment target.

15. (Previously Presented) The discharging surface treatment device according to claim 12, wherein an inert-gas supplying unit is installed so as to interpolate an inert gas between the discharge processing electrode and the treatment target.

16. (Previously Presented) The discharging surface treatment device according to claim 10, wherein an X-axis driving device, a Y-axis driving device and a Z-axis driving device, which relatively shift the discharge processing electrode and the treatment target in the X-direction, Y-direction and Z-direction, are installed so that the X-axis driving device, the Y-axis driving device and the Z-axis driving device allow the discharge processing electrode to scan the treatment target to form the coating film on the surface of the treatment target.

17. (Previously Presented) The discharging surface treatment device according to claim 11, wherein an X-axis driving device, a Y-axis driving device and a Z-axis driving device, which relatively shift the discharge processing electrode and the treatment target in the X-direction, Y-direction and Z-direction, are installed so that the X-axis driving device, the Y-axis driving device and the Z-axis driving device allow the sintered electrode to scan the treatment target to form the coating film on the surface of the treatment target.

18. (Previously Presented) The discharging surface treatment device according to claim 12, wherein an X-axis driving device, a Y-axis driving device and a Z-axis driving device, which relatively shift the discharge processing electrode and the treatment target in the X-direction, Y-direction and Z-direction, are installed so that the X-axis driving device, the Y-axis driving device and the Z-axis driving device allow the discharge processing electrode to scan the treatment target to form the coating film on the surface of the treatment target.